Possible Variance Timeframe

(Assuming a Facility Currently Has Only Secondary Treatment) - DRAFT

Table X:

Task
1. Implementation of advanced operational strategies to reduce nutrients using existing infrastructure. Evaluate effects of operational changes and fine tune as necessary. Operations staff identify potential minor capital improvements, if any, that could be made to further advance operational strategies. Prepare optimization study, as required in Circular DEQ 12B, including documentation of operational changes and results as well as a preliminary feasibility assessment of the viability of trading, reuse, etc.
2. **If HAC (or standards)* not achieved**, hire an engineer to prepare a preliminary engineering report (PER) that evaluates options for minor and/or major facility improvements, trading or reuse that lead to further nutrient reductions that build upon developed operational strategies, if appropriate. Continue to fine-tune operational strategies. Begin discussion with funding agencies and submit PERs to those agencies, if necessary (for major upgrades).
3. Go through funding agency timelines and requirements for planning, if necessary. This may involve legislative approval. Implement minor facility improvements, if appropriate, and fine tune operations for further TN and TP reductions.
4. Design major capital improvements. Go through DEQ and other funding agency review and approval processes for the design/bidding phase, including MEPA analysis, adjustments of rates and charges, legal opinions, etc. Bid major capital project.
5. Construct major capital project, including trading and/or reuse, if appropriate. Begin operating new infrastructure and fine tuning operations. Continue with advanced operational training with new infrastructure. Evaluate nutrient reductions achieved with major capital project and operator optimization.
6. **If HAC (or standards)* still not achieved**, hire engineer to evaluate alternatives in a PER for next steps to meet HAC (or standards)* for TN and TP.
7. Submit PER to funding agencies for review, approval, MEPA, etc. Legislative approval required? Obtain funding.
8. Design and bid capital project to meet HAC (or standards)* for TN and TP.
9. Construct capital upgrades, including trading, reuse, etc., if appropriate. Continue with operational optimization to meet HAC (or standards)*.

*Effluent nutrient concentrations that meet instream standards may be higher than those that meet HAC, and vis-versa.

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